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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/712,029	11/13/2000	Dae-Woo Lee	4234-9	9120

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EXAMINER

GOFF II, JOHN L

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 02/27/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/712,029

Applicant(s)

LEE, DAE-WOO

Examiner

John L. Goff

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 4-8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 9-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is in response to Amendment A filed on 12/31/02. All previous objections to the claims have been overcome.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

3. Claims 1, 2, 10, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Draexler (U.S. Patent 4,551,392) in view of Hoover (U.S. Patent 2,656,292) and Okamoto et al. (U.S. Patent 5,569,716).

Draexler is directed to a composite material for use in a building element wherein the material comprises multiple sheets (layers) including a distinct sheet of EPDM (synthetic rubber), vulcanizing agent (including accelerators), and additives (Column 1, lines 6-7 and 46-49 and Column 2, lines 12-16 and 45-54). Draexler teaches that the sheet is resistant to heat and ozone and exhibits swelling resistance against polar, organic media (water) (Column 1, lines 9-11). Draexler teaches that the additives in the sheet include age resister (age retarders including but not limited to quinoline type (e.g. polymerized trimethyl dihydroquinoline)), an adhesion-providing agent (tackifying resin), a softener (plasticizer oils), and a filler material (Column 2, lines 55-63 and Column 4, line 55). Draexler teaches using conventional techniques such as mixers, rollers, and calenders to form the EPDM, vulcanizing agent, and additives into a vulcanizable composition sheet (layer) of a desired width and thickness (Column 3, lines 5-15

Art Unit: 1733

and 49-51 and Column 4, lines 14-17). The vulcanizable composition sheet can then be welded to other material sheets to form a building element (Column 4, lines 14-15). Draexler is silent as to attaching a release paper to upper and lower surfaces of the sheet. One of ordinary skill in the art at the time the invention was made would have readily appreciated modifying Draexler to include providing a release paper on the upper and lower surfaces of the vulcanizable composition sheet as suggested by Hoover to prevent tearing or damaging the sheet during handling, storage, or transportation of the sheet prior to welding the sheet with other materials to form a building element. It is noted Draexler is silent as to the age resister including types such as p-phenylenediamine and styrenated phenol. Absent any unexpected results, one of ordinary skill in the art at the time the invention was made would have readily appreciated modifying Draexler to include age resisters such as p-phenylenediamine type and styrenated phenol type as these were well known age resisters in the art as shown for example by Okamoto et al.

Hoover is directed to a tacky rubber sheet having a non-stick liner applied to both sides of the sheet (Figures 1-3 and Column 1, lines 1-12 and Column 3, lines 13-16 and 24-29). Hoover teaches that the liner prevents tearing or damaging the sheet during handling, storage, or transportation (Column 2, lines 24-30). Okamoto et al. are directed to an adhesive rubber composition. Okamoto et al. teach the composition comprises natural or synthetic rubber, vulcanizing agent (including accelerators), age-resister (including p-phenylenediamine type, hindered phenol type, and quinoline type), adhesion-providing agent, softener, and fillers (Column 1, lines 51-57 and Column 2, lines 15-16, 28-29, and 62-64 and Column 4, lines 49-50 and 61-67 and Column 5, lines 1 and 6-16).

Art Unit: 1733

4. Claims 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Draexler, Hoover, and Okamoto et al. as applied above in paragraph 3, and further in view of Nottebohm (U.S. Patent 2,338,960) and McCortney (U.S. Patent 2,080,730).

Draexler, Hoover, and Okamoto et al. as applied above teach all of the limitations in claims 3 and 9 except for a teaching on using tragacanth rubber or polyvinyl poval as the adhesion-providing agent (tackifying resin). However, it is well known and conventional in the art to use tragacanth rubber as an adhesion-providing agent in rubber compositions as shown for example by Nottebohm and McCortney. Absent any unexpected results, one of ordinary skill in the art at the time the invention was made would have readily appreciated incorporating as the adhesion-providing agent in the method taught by Draexler as modified by Hoover and Okamoto et al. tragacanth rubber as was conventional in the art as shown for example by Nottebohm and McCortney.

Nottebohm is directed to a rubber binder that includes tragacanth as the binding agent (Column 1, lines 44-55 and Column 2, lines 1-2). McCortney is directed to a rubber cement composition that includes tragacanth as the resin (Page 1, lines 7-12 and Page 2, lines 25-30).

Response to Arguments

5. Applicant's arguments with respect to claims 1-3 and 9-11 have been considered but are moot in view of the new ground(s) of rejection. Applicant argues Draexler does not teach age retarders such as phenylisopropyl-p-phenylenediamine or styrenated phenol. It is noted Draexler teaches a rubber composition that includes age resisters, and Draexler shows an example teaching a quinoline type age resister. However, Draexler is not limited to any specific age

Art Unit: 1733

resister. Furthermore, age resisters comprising p-phenylenediamine and styrenated phenol are well known in the art as shown for example by Okamoto et al.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nakafutami et al. (U.S. Patent 5,804,644) are directed to a rubber composition comprising natural or synthetic rubber, vulcanizing agent (including accelerators), age-resister (including p-phenylenediamine type, hindered phenol type, and quinoline derivatives), softener, and fillers (Column 6, lines 8-12 and Column 7, lines 5-6, 15-21, and 27-29 and Column 8, lines 1-10 and 34-38).

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

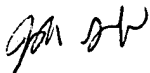
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 1733

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John L. Goff** whose telephone number is **703-305-7481**. The examiner can normally be reached on M-Th (8 - 5) and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on 703-308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



John L. Goff
February 24, 2003



Michael W. Ball
Supervisory Patent Examiner
Technology Center 1700